REMARKS

No new matter has been added via the claim amendments.

In the parent application, the Examiner rejected certain claims based on use of the word "substantially." The term substantially is used in the claims to connote that the properties recited are the same, but allowing for minor variations which may occur as a result of minor differences in tolerance. If the Examiner's position is upheld, it would mean that there would be no room for normally occurring variations in materials and their respective properties. As a result, any recitation of a value would be strictly restricted to the value. The Applicants do not intend to claim an exact value, nor do they wish to claim a wide variation. They wish, however, to be able to use language which would describe the inherent nature of any physical system, namely that nothing is ever exact.

As to the new recitation "magnetically-permeable, electric field confining covering," support is found throughout the specification as originally filed. For example, on page 5, lines 7-14:

> An important advantage of the machine according to the invention resides in the fact that the electric field is nearly equal to zero in the end region of the windings outside the second layer with semiconducting properties. Thus no electric fields need to be controlled outside the winding and no field concentrations can be formed, neither within the sheet, nor in winding end regions, nor in transitions therebetween.

Accordingly, a zero or "nearly equal to zero" electric field implies electric field confinement. Additionally, the windings are "magnetically-permeable" since the rotating magnetic field of the rotor has to permeate or sweep through the windings to develop an electric output (*i.e.*, to exhibit a generator effect).

Consideration of the following is respectfully requested.

CONCLUSION

For the foregoing reasons, all presently pending claims are now believed to be in condition for allowance. Early notice of the same is hereby respectfully requested.

Respectfully submitted,

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1. (Thrice Amended) An electric high voltage AC machine for direct connection to a distribution or transmission network, said machine including at least one winding and having a neutral point and comprising at least one current-carrying conductor and a magnetically permeable, electric field confining covering surrounding and being in electrical contact with the conductor; a first layer having semi-conducting properties surrounding the conductor and being in electrical contact therewith, a solid insulating layer surrounding said first layer and being in intimate contact therewith, and an outer [second] layer having semi-conducting properties surrounding and being in intimate contact with said insulating layer, and grounding means for connecting the neutral point of said winding in circuit to ground.

9. (Thrice Amended) An electric AC machine having a magnetic circuit for high voltage comprising:

a magnetic core and at least one winding, wherein said winding is formed of a cable comprising at least one current-carrying conductor and a magnetically permeable, electric field confining covering surrounding the conductor, each conductor having a number of conductor elements, and inner semi-conducting layer surrounding the conductor and being in electrical contact with at least one of the conductor elements, an insulating layer of solid insulating material surrounding said and being in intimate contact with said inner semi-conducting layer, and an outer semi-conducting layer surrounding and being in intimate contact with said insulating layer, and grounding means for connection to at least one selected point of said winding to ground.

35. (Amended) A high voltage electric machine comprising at least one winding, wherein said winding comprises a cable including at least one current-carrying conductor and a magnetically permeable, electric field confining cover surrounding the conductor including an inner semiconducting layer surrounding the conductor and being in electrical contact therewith, a solid insulating layer surrounding the inner layer and being in intimate contact therewith, and an outer semiconducting layer surrounding the insulating layer and being in intimate contact therewith, said inner and outer layers forming equipotential surfaces around the conductor, said cable forming at least one uninterrupted turn in the corresponding winding of said machine.

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1. (Thrice Amended) An electric high voltage AC machine for direct connection to a distribution or transmission network, said machine including at least one winding and having a neutral point and comprising at least one current-carrying conductor and a magnetically permeable, electric field confining covering surrounding and being in electrical contact with the conductor; a first layer having semi-conducting properties surrounding the conductor and being in electrical contact therewith, a solid insulating layer surrounding said first layer and being in intimate contact therewith, and an outer layer having semi-conducting properties surrounding and being in intimate contact with said insulating layer, and grounding means for connecting the neutral point of said winding in circuit to ground.

2. (Amended) The machine according to claim 1, wherein the potential of said first layer is substantially equal to the potential of the conductor.

3. (Amended) The machine according to claim 1, wherein the potential of said first layer is substantially equal to the potential of the conductor.

4. (Amended) The machine according to claim 3, wherein said second layer is connected to a predetermined potential.

5. (Amended) The machine according to claim 4, wherein said predetermined potential is ground potential.

6. (Amended) The machine according to claim 1, wherein at least two adjacent layers have substantially equal thermal expansion coefficients.

7. (Amended) The machine according to claim 1, wherein said current-carrying conductor comprises a number of strands, only a minority of said strands being non-isolated from each other.

8. (Twice Amended) The machine according to claim 1, wherein said layers are adjacent to each other, and each of said layers has at least one connecting surface each being fixedly connected to the connecting surface of the adjacent layer along substantially the whole of said connecting surface.

9. (Thrice Amended) An electric AC machine having a magnetic circuit for high voltage comprising:

a magnetic core and at least one winding, wherein said winding is formed of a cable comprising at least one current-carrying conductor and a magnetically permeable, electric field confining covering surrounding the conductor, each conductor having a number of conductor elements, and inner semi-conducting layer surrounding the conductor and being in electrical contact with at least one of the conductor elements, an insulating layer of solid insulating material surrounding said and being in intimate contact with said inner semi-conducting layer, and an outer semi-conducting layer surrounding and being in intimate contact with said insulating layer, and grounding means for connection to at least one selected point of said winding to ground.

10. (Amended) The machine according to claim 9, wherein said cable also comprises a metal shield and a sheath.

11. (Amended) The machine according to claim 9, wherein said grounding means comprise means for direct grounding of the winding.

12. (Amended) The machine according to claim 1, wherein said grounding means comprise means for low-resistance grounding of the winding.

13. (Amended) The machine according to claim 12, said machine having a Y-connected winding neutral point and wherein said low-resistance grounding means comprise a low-resistance resistor connected between the neutral point and ground.

14. (Amended) The machine according to claim 12, said machine having a Y-connected winding the neutral point further comprising a transformer having a primary and a secondary winding and wherein said low-resistance grounding means comprises a resistor connected in the secondary of the transformer whose primary is connected between the neutral point and ground.

15. (Amended) The machine according to claim 1, wherein said grounding means comprise means for low-inductance grounding of the winding.

16. (Amended) The machine according to claim 15, said machine having a Y-connected winding the neutral point and wherein said low-inductance grounding means comprises a low-inductance inductor connected between the neutral point and ground.

17. (Amended) The machine according to claim 15, said machine having a Y-connected winding neutral point, further comprising a transformer having a primary and a secondary winding and wherein said low-inductance grounding means comprises an inductor connected in the secondary of the transformer whose primary is connected between the neutral point and ground.

18. (Amended) The machine according to claim 1, wherein said grounding means comprise means for high-resistance grounding of the winding.

19. (Amended) The machine according to claim 18, said machine having a Y-connected winding neutral point and wherein said high-resistance grounding means comprise a high-resistance resistor connected between the neutral point and ground.

20. (Amended) The machine according to claim 18, said machine having a Y-connected winding neutral point further comprising a transformer having a primary and a secondary winding and wherein and wherein said high-resistance grounding means comprise a resistor connected in the secondary of the transformer whose primary is connected between the neutral point and ground.

21. (Amended) The machine according to claim 1, wherein said grounding means comprise means for high-inductance grounding of the winding.

22. (Amended) The machine according to claim 21, said machine having a Y-connected winding the neutral point and wherein said high-inductance grounding means comprises a high-inductance inductor connected between the neutral point and ground.

23. (Amended) The machine according to claim 21, said machine having a Y-connected winding neutral point further comprising a transformer having a primary and a secondary winding and wherein said high-inductance grounding means comprises an inductor connected in the secondary of the transformer whose primary is connected between the neutral point and ground.

24. (Amended) The machine according to claim 1, said machine having a Y-connected winding neutral point , further comprising a transformer having a primary and a secondary winding and wherein said grounding means comprises a reactor connected in the secondary of the transformer whose primary is connected between the neutral point and ground, said reactor having characteristics such that capacitive current during a ground fault is substantially neutralized by an equal component of inductive current contributed for by the reactor.

25. (Amended) The machine according to claim 1, wherein said grounding means comprises means for changing the impedance of the connection to ground in response to a ground fault.

26. (Amended) The machine according to claim 1, wherein said grounding means comprises an active circuit.

27. (Amended) The machine according to claim 1, wherein said grounding means comprises a Y-Δ grounding transformer connected to the network side of the machine.

28. (Amended) The machine according to claim 1, wherein said grounding means comprise a zigzag grounding transformer connected to the network side of the machine.

29. (Amended) The machine according to claim 1, said machine having a Y-connected winding neutral point wherein said grounding means comprise a suppression filter tuned for the n:th harmonic.

30. (Amended) The machine according to claim 1, said machine having a Y-connected winding neutral point wherein said grounding means comprise a switchable suppression filter detuned for the n:th harmonic.

31. (Amended) The machine according to claim 29, wherein said n:th harmonic is the third harmonic.

32. (Amended) The machine according to claim 1, said machine having a Y-connected winding neutral point wherein said grounding means comprise an overvoltage protector connected between said neutral point and ground.

33. (Amended) The machine according to claim 1, said machine having a Y-connected winding neutral point wherein an overvoltage protector is connected between said neutral point and ground in parallel to said grounding means.

34. (Amended) A distribution or transmission network, which comprises at least one machine according to claim 1.

35. (Amended) A high voltage electric machine comprising at least one winding, wherein said winding comprises a cable including at least one current-carrying conductor and a magnetically permeable, electric field confining cover surrounding the conductor including an inner semiconducting layer surrounding the conductor and being in electrical contact therewith, a solid insulating layer surrounding the inner layer and being in intimate contact therewith, and an outer semiconducting layer surrounding the insulating layer and being in intimate contact therewith, said inner and outer layers forming equipotential surfaces around the conductor, said cable forming at least one uninterrupted turn in the corresponding winding of said machine.

39. (Amended) The machine of claim 35, wherein the cover is formed of a plurality of layers including an insulating layer and wherein said plurality of layers are substantially void free.

40. (Amended) The machine of claim 35, wherein the cover is in electrical contact with the conductor.

41. The machine of claim 40, wherein the layers of the cover have substantially the same temperature coefficient of expansion.

42. (Amended) The machine of claim 35, wherein the cover is heat resistant such that the machine is operable at 100% overload for two hours.

43. (Amended) The machine of claim 35, wherein the machine, when energized, produces an electric field and the cover confines the electric field so that the cable is operable free of sensible end winding loss.

44. (Amended) The machine of claim 35, wherein the machine, when energized, produces an electric field and the cover confines the electric field so that the winding is operable free of partial discharge and field control.

45. The machine of claim 35, wherein the winding comprises multiple uninterrupted turns.

46. The machine of claim 35, wherein the cable comprises a transmission line.

47. The machine of claim 35, wherein the cable is flexible.

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